

Addressing Barriers to Healthcare Access: A Comprehensive Analysis of Oral Health Disparities in Duval County, Florida, United States

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ABSTRACT

The report highlights the pressing need to address barriers to healthcare access, particularly among marginalized communities, and the associated impact on population health. The report emphasizes the overarching goal of preventing and mitigating oral and craniofacial diseases while enhancing access to preventive services and dental care, as outlined in Healthy People 2030. It underscores the importance of achieving equity and reducing health disparities in society, with a focus on evidence-based interventions tailored to diverse population groups. Furthermore, the report delves into the challenges specific to oral health access in the Florida population. It discusses the burden of oral diseases in both pediatric and adult populations, emphasizing the link between oral health and overall well-being. The disparities in healthcare access based on race and socioeconomic factors are also explored. The report examines initiatives aimed at addressing these challenges, including mobile dental programs and non-profit organizations dedicated to providing dental care to underserved populations. It underscores the role of community engagement through social media platforms in raising awareness, evaluating strategies, and establishing SMART goals to improve healthcare access. In conclusion, the report calls for collaborative efforts at individual, community, and organizational levels to promote oral health and general well-being in Duval County. It emphasizes the potential for enhancing access to healthcare resources to create a healthier community and maintain social harmony.

Keywords: Healthcare access; Oral health conditions; Health barriers; Duval County; FLA-MOM

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INTRODUCTION

The pressing imperative to ensure healthcare access for all has spurred nationwide objectives and established targets aimed at enhancing health and well-being [1]. According to Healthy People 2030, the overarching goal is to "Prevent and mitigate oral and craniofacial diseases, conditions, and injuries while enhancing access to preventive services and dental care [2]. The primary objective is to achieve equity and diminish health disparities within our society. All

interventions grounded in evidence are specifically tailored to be quantifiable and attainable for diverse population groups.

Promoting optimal oral healthcare plays a pivotal role in preserving the robust foundation of our society by unlocking the full potential of health across the entire lifespan. Research has revealed a strong link between inadequate dental hygiene and subpar overall health. The 2022 report from the Centers for Disease Control

and Prevention (CDC) underscores that suboptimal oral health, particularly periodontal disease, is correlated with chronic conditions such as diabetes and cardiovascular ailments. It is disconcerting that over 40% of the American population reports experiencing oral pain, raising significant concerns.

The absence of access to dental care exacerbates health outcomes, particularly among socially disadvantaged groups, such as those experiencing poverty, racial/ethnic minorities, and vulnerable populations like women and the elderly [3]. Inadequate access to education, limited resources, and economic instability stands out as prominent issues that influence the social determinants of health [4]. Addressing oral healthcare challenges necessitates a collaborative endeavor involving the community and policymakers. This partnership involves the assessment, execution, and development of healthcare policies with the aim of delivering a holistic healthcare strategy for both families and patients [5].

CHALLENGES PERTAINING TO ORAL HEALTH ACCESS IN THE FLORIDA POPULATION

Substandard oral health and a lack of attention to this matter are contributing to a rising incidence of dental ailments. According to Florida's 2016 Burden of Oral Disease Surveillance Report, the emphasis on oral health is justified by its profound influence on overall health and quality of life. Achieving ideal oral health is subject to variations associated with sociodemographic factors, encompassing gender, age, household composition, and socioeconomic standing [6].

THE ORAL HEALTH CONDITION OF PEDIATRIC AND INFANT POPULATIONS

The dental health-related burden stemming from untreated early adulthood tooth decay exerts a

substantial influence on a larger segment of the population, primarily due to its enduring ramifications on concurrent chronic health conditions, including oral cancer. Furthermore, the occurrence of cleft lip and cleft palate is intricately linked to maternal dietary risk factors such as alcohol consumption, smoking, and nutritional deficiencies. Data extracted from the Oral Health Profile for the year 2020 reveals that in Duval County, the incidence rate of cleft lip and cleft palate stood at 4.2 cases per 10,000 live births, while in the state of Florida, it was slightly higher at 4.9 cases per 10,000 live births [7]. This increased burden of morbidity among children has had tangible repercussions on both the Length of Life and Quality of Life for individuals residing in Duval County [8]. Ensuring good oral health practices plays a pivotal role in averting adverse birth outcomes, subsequently reducing the occurrence of painful cavities in children and mitigating the risk of chronic conditions that may manifest in adulthood. Furthermore, in 2020, there were 827 emergency department visits per 100,000 individuals for dental conditions among those aged 5 years and older in Duval County, compared to 462 per 100,000 individuals in the state of Florida. These statistics have profound implications for the overarching objective of attaining health and well-being devoid of diseases, injuries, or fatalities that contribute to the overall health of our communities [8].

THE ORAL HEALTH CONDITION OF ADULT POPULATIONS

The 2022 reports stemming from the Florida Birth Defects Registry (FBDR) indicate that, in 2016, a notable 48.3% of adults residing in Duval County underwent permanent tooth extractions as a consequence of tooth decay or gum disease [8]. In contrast, 60% of the adult population in Duval County sought dental care by visiting a dentist or dental clinic

during the same year. It is worth noting that periodontitis, which is closely associated with chronic conditions that elevate the risk of oral cancers, can be influenced by factors such as smoking, substance consumption, and various systemic diseases.

The prevalence of these oral health conditions appears to be notably higher in Duval County when compared to other counties within the state of Florida. In 2019, the age-adjusted rate of oral cancer incidence in Duval County was 17.1 cases per 100,000 individuals, exceeding the state average of 14 cases per 100,000. Furthermore, in 2020, there were three reported deaths per 100,000 individuals in Duval County attributable to oral cancer [9]. The elevated incidence of oral cancer, not only in Duval County but also across the state of Florida, may be closely linked to the inadequate availability of preventive oral healthcare resources [10].

According to the findings from the 2018 Florida Dental Association Foundation Community Oral Health Summit, dental-related emergency department (ED) visits have surpassed 151,000 cases throughout the state of Florida (Figure 1). Specifically, within the timeframe spanning from 2013 to 2017, Duval County witnessed over 9,000 such visits. These ED visits for dental issues come with a substantial cost burden due to the high expenses associated with emergency dental treatments [11]. This financial strain can potentially discourage individuals from seeking timely oral care, consequently contributing to the development of chronic dental conditions.

It is noteworthy that a significant proportion of reported oral healthcare service recipients in both Florida and Duval County fall within the age group of 25-34 years, comprising 35% of the patient population in Florida and 37% in Duval County during the year 2017 (Figure 2). Once again, it is essential to

underscore that delayed dental care can result in the progressive deterioration of oral health over an extended period of one's lifetime [11].

ACCESS TO ORAL HEALTHCARE SERVICES

In the year 2020, Duval County experienced a shortage of licensed dentists, with a rate of 53.9 licensed Florida Dentists per 100,000 residents [12]. This shortage poses considerable challenges for patients seeking both preventive and urgent dental care. A limited number of healthcare professionals leads to extended waiting periods, difficulties in securing appointments, and reduced durations for patient-doctor consultations. A study conducted in 2017 found that, while 57% of participants did not encounter any hindrances in accessing dental resources, 13% reported encountering longer waiting times for appointments or a lack of available appointments. Specialized treatments such as endodontic surgeries and geriatric procedures are integral components of preventive dentistry. However, in Duval County, the lack of access to these specialized treatments is a significant concern, primarily due to the absence of comprehensive oral treatment coverage under Medicare [13]. Furthermore, the expenses associated with dental treatments have surged in Duval County, amounting to \$16,620,677 in 2017, compared to \$11,315,960 in 2013. Consequently, even insured individuals are confronted with formidable financial barriers [11] (Figure 3).

Community water fluoridation (CWF) stands as an effective public health intervention for addressing tooth decay nationwide. This policy has made a significant impact on oral health by reducing the incidence of tooth decay by approximately 10%. CWF is a highly cost-effective service that has been implemented across the nation to combat tooth decay across all age groups [14]. As of 2019, a substantial

96.7% of the population in Duval County had access to fluoridated water. The widespread implementation of CWF not only contributes to oral health but also results in substantial cost savings for families and healthcare systems. This achievement has led to a remarkable reduction in dental decay rates over the past several decades in the United States. However, it is worth exploring whether a larger number of households relying on well water, particularly in economically disadvantaged areas of Duval County, could potentially impact the effectiveness of CWF in those regions [15].

HEALTHCARE DISPARITIES BASED ON RACE AND SOCIOECONOMIC FACTORS

Positive healthcare outcomes are influenced by a multitude of factors, encompassing patient sociodemographic characteristics, the healthcare process, clinical care received by patients, and the overall healthcare infrastructure. Ensuring access to oral healthcare is of paramount importance in mitigating health disparities, particularly among low-income individuals, the uninsured, and members of racial/ethnic minority groups, immigrants, and those residing in rural areas. As depicted in Figure 3, a significant proportion of emergency department (ED) visits is reported among the Non-Hispanic Black population in Duval County, accounting for 49% of the county's total population [4]. Notably, 35% of Duval County's population is covered by Medicaid/Medicaid Managed Care (MMC)/KidCare, a figure nearly equivalent to the proportion of self-paid individuals utilizing ED services. It is essential to reiterate that many of these ED visits could have been avoided if individuals had access to adequate preventive care measures [11] (Figure 3).

MEDICAID DENTAL INITIATIVES IN DUVAL COUNTY

Dental Healthcare Program Offered by the Florida Department of Health in Duval County:

Considering the circumstances, the Duval County Dental Program is an endeavor undertaken by the Florida Department of Health with the aim of attaining comprehensive oral healthcare for children aged 3 to 20 years.

This initiative primarily targets children covered by Medicaid and those eligible for reduced-cost treatments, ensuring that every child's family, unable to afford the expenses, can access optimal oral care [16]. The program encompasses a comprehensive range of preventive measures, including examinations, prophylactic treatments, fillings, extractions, and counseling sessions. Additionally, it offers dental emergency services and flexible appointment scheduling to accommodate the needs of the community [16].

Mobile Dental Program: In response to the nationwide crisis of restricted access to healthcare services due to transportation challenges, initiatives such as mobile dental services have been implemented. These healthcare services prove to be efficacious in preserving health status by delivering dental care to schoolchildren, offering treatment modalities at no cost.

Two mobile dental units, namely the Happy Tooth Express and Smile Express, operate within schools to provide these services. Students up to grade 5 who qualify for the free and reduced lunch program in Duval County are eligible to receive mobile dental services, including oral examinations and minor dental treatments [16]. These services are aimed at addressing dental crises and promoting a healthier society.

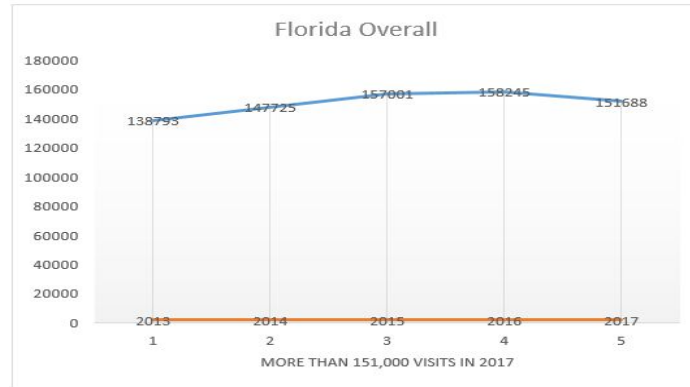


Figure 1: Number of Dental related ED visits in Florida and Duval County, 2017
Reference: Florida Dental Association Foundation Community Oral Health Summit, 2018
 (<https://www.floridadental.org/foundation/programs/jacksonville-oral-health-summit>)

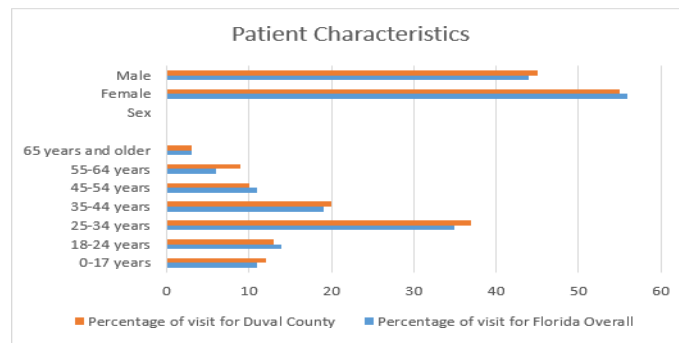


Figure 2: Percentage of patient visiting ED in Florida and Duval County, 2017
Reference: Florida Dental Association Foundation Community Oral Health Summit, 2018
 (<https://www.floridadental.org/foundation/programs/jacksonville-oral-health-summit>)

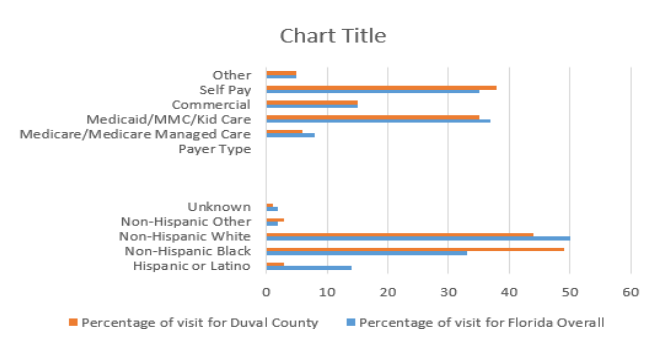


Figure 3: Percentage of patients in Florida and Duval County, 2018
Reference: Florida Dental Association Foundation Community Oral Health, 2018
 (<https://www.floridadental.org/foundation/programs/jacksonville-oral-health-summit>)

The Florida Federally Qualified Health Center (FQHC) deploys mobile medical and dental units, employing community outreach strategies to enhance access to oral healthcare for populations confronting barriers [15]. These initiatives extend beyond primary care and encompass oral health preventive services. Notably, one out of every 12 individuals in Florida relies on these services for healthcare, with funding provided under the National Public Health Services Act [17].

MOBILE NON-PROFIT ORGANIZATION FOR DENTAL HEALTH CARE IN DUVAL COUNTY

Florida Mission of Mercy (Fla-Mom): The Florida Dental Association (FDA) champions a strategic initiative aimed at delivering comprehensive oral healthcare to all residents of Florida. This flagship program, operating as a charitable organization, conducts periodic two-day dental treatment sessions entirely free of charge. Its mission is to ensure optimal dental care access for underserved and minority populations [11].

Florida Baptist Mobile Dental Ministry: This ministry provides dental care services to the population of Florida through health fairs and educational counseling. Its impact is significant in disseminating vital information to individuals who may lack awareness of preventive dental care and oral hygiene practices [18].

Duval County Community Health Center: Operating on a Sliding Scale model, this clinic is dedicated to promoting oral healthcare in alignment with patients' Medicaid eligibility and financial assistance status [18].

SOCIAL MEDIA COMMUNITY ENGAGEMENT

Enhancing communication with various populations through social media platforms has gained significant popularity in recent times. Disseminating

recommendations for strategies and public health policies via social media platforms is making a profound impact on both youth and families nationwide. Digital platforms play a pivotal role in comprehending the interventions needed to reach the target population effectively. Social media initiatives encompass the following objectives:

Addressing Population Concerns Regarding Barriers to Healthcare Access: social media serves as a powerful tool for reaching a wide and diverse community. Individuals express their concerns and issues through tweets, video sharing, messaging, and participation in digital social engagement campaigns. Engaging with communities via social media fosters meaningful interactions within society.

Evaluating Strategies to Determine Community Practices: Promotional activities such as the dissemination of infographics and digital surveys prove instrumental in assessing the effectiveness of strategies and plans essential for the health and well-being of the population.

Establishing SMART Goals and Objectives: Crafting content that raises awareness and resonates with the population in achieving specific goals. Expanding the social media audience contributes to amplifying voices that advocate for addressing barriers and fulfilling the needs and desires of the population.

CONCLUSION

Addressing the issues and obstacles faced by the residents of Duval County, particularly within marginalized communities, is essential for enhancing overall population health. The significant neglect of oral health concerns is primarily attributable to a lack of awareness and economic instability. Enhancing access to healthcare resources holds the potential to

elevate the standard of comprehensive oral care in Duval County, ultimately leading to the creation of a healthier community. Harmonious coexistence within society can be both maintained and achieved through concerted efforts at the individual, community, and organizational levels. These efforts are geared toward the promotion of not only oral health but also the general well-being of the population.

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